"Alexafying" shoppers: the examination of Amazon's captive relationship strategy

Abstract

The virtual assistants' market is drastically growing and is expected to reach $2.1 billion by 2020. Nonetheless, the quick expansion and high penetration of e-retailers' AI ecosystem into the shopper's journey is still under-researched in the extant literature. Amazon's Alexa in particular has been fast proliferating into the customer's journey, favoring the development of captive audiences given this new ambient environment. Through a mixed methodology using both qualitative and quantitative approaches, this study examines Amazon's captive relationship strategy on shoppers, brands and competing retailers. The research findings show that Amazon's AI relationship strategy with its customers is based on forming a multi-faceted identity for the AI that would later on facilitate a captive situation that would lead to an addictive relationship. This study is amongst the first to examine the rapid development of e-retailers' AI ecosystem into the shopper's journey. Taking the pioneering case of Amazon's Alexa powered devices, this research presents a working framework upon which scholars and practitioners alike could base their future studies and strategies on in the fast-growing field of interactive voice assistants and AI led conversations.

Keywords: Amazon; Alexa; Retailing; E-commerce; AI; Customer journey

Introduction

Technology has played a key part in the transformation of marketing from a transactional state to a relational one. Indeed, consumers' digital dialogues with companies represent today a great appeal for marketers whereby the instinctive need to connect combined with accessibility, speed, and relevance, are creating an unmatched formula for customer engagement (Benady, 2014). The e-social interactions that ensue are leading to the anthropomorphization of digital conversational tools such as chatbots and interactive voice assistants (IVA) (Ramadan, 2019a). As these conversational partners become humanized in the minds of consumers, their artificial personalities develop on the basis of emotional, thought, and behavioral patterns that are unique in their perceived characteristics (Loureiro, 2013; Lischer, 2015).

The market for virtual assistants has been growing drastically since 2016 whereby it is expected to reach $2.1 billion by 2020 (Chung et al., 2017; Ramadan, 2019a). In 2019, 26.2% and 22% of respectively the US and UK total population owned a smart speaker (Caddy, 2019). IVAs, such as Apple's Siri, Google's Assistant, and Amazon's Alexa, strive to differentiate themselves on a set of functional, relational, emotional and experiential benefits that they promise to deliver

to the user (Ramadan, 2019a). These Self-Service Technologies (SSTs) permit clients to use services independently without the help of employees (Meuter et al, 2000). Furthermore, third party companies are increasingly integrating their products and services within IVAs in order to provide personalized experiences for their consumers (Gordon and Wroclawski, 2018). Deemed as an affordable luxury, Amazon's Alexa in particular has been proliferating the customer's journey and lifestyle via the different Echo products it offers (Ramadan, 2019a). Through a range of basic and advanced speakers (Echo Dot, Echo and Echo Plus), built-in camera devices that advise users on their looks (Echo Look), Microwave units (AmazonBasics) and built-in display devices (Echo Show and Echo Spot), Amazon's engagement ecosystem of Alexa-powered products is currently the most popular and best-selling amongst IVAs.

While the proliferation of IVAs has been mainly focused on in-home usage, Amazon has recently launched a set of mobile Alexa powered devices that are meant to be instantly accessible and used on the go. These new devices include a set of wearable products such as the Echo Buds (wireless earbuds), Echo Frames (smart glasses based on an auditory experience), and Echo Loop (smart ring) all launched in 2019, in addition to the Echo Auto destined for in-car usage which was launched in 2018. These new devices offer all Alexa features (such as music, entertainment, news, weather, shopping, etc…), set location-based routines, and interact with other Echo devices installed at one's home (Amazon, 2019). These devices are expected to further monetize users' social AI interactions, as they will not be confined anymore to an in-home environment given this new ambient computing environment.

This altered consumption journey is expected to have significant consequences on shoppers, brands, competing retailers and Amazon itself. Indeed, the advent of always-on AI devices is expected to create a locked-in usage with the company's services, hijacking through this process all other potential marketing touchpoints that brands and retailers might be using to reach their shoppers. In fact, reliance on IVAs is starting to take form as these devices build closer and deeper emotional usage states with consumers while enabling self-expressions (Antonucci et al., 2017; Brill et al., 2019; Farah and Ramadan, 2020; Ramadan et al., 2021). While the brand-consumer relationship literature extensively studied the many facets of relational behaviors (e.g. Fournier, 1998; Escalas and Bettman, 2003; Ahuvia, 2005; Carroll and Ahuvia, 2006; Fournier and Alvarez, 2013; Wallace et al., 2014), the literature gap is still sizeable when it comes to voice assistants related relationships. Questions pertaining to affectivity, behavioral preoccupation and

dependence are yet to be studied and examined within an AI-consumer relationship context. As firms mainly thrive through building and leveraging their relationships with consumers (Fournier, 1998), the AI-consumer relationship and experience are expected to affect companies' sustainability in the long-term.

The marketing literature in the nascent field of IVAs and locked-in AI usage is still scarce. There is a dire need today to understand how consumers are relating with such AI powered devices and the consequences on consumer behavior, the owning company, competitors and brands. For that purpose, this paper investigates customers' experience and relationship with Amazon's Alexa within the e-retailer's engagement ecosystem. Accordingly, the key research premise of this study is based upon the examination of the perception and usage of the IVA, alongside the development of consumers' relationship with it, which might lead to potentially alarming behaviors such as addiction. The resulting captive AI ecosystem proliferating into the shopper's journey and the effect of such a relationship strategy on shoppers, brands and competing retailers is consequently discussed.

Literature review

Amazon's ecosystem and omni-channel service strategy

Customers have very high expectations from the companies and brands they engage with. Amazon has earned shoppers' trust by delivering the products consumers want on time and in one piece, as well as providing accurate product suggestions online while bringing forth credible reviews from peers (Zhu and Zhang, 2010; Smith, 2017; Ramadan et al., 2019). This is mainly driven by Amazon's strategy, which is based on customer obsession instead of focusing on competitors, passion for invention, committing to operational excellence, and long-term thinking (Farah et al., 2020; Ramadan, 2019b). In order to drive these four strategic company fundamentals, Amazon has built an engagement ecosystem based on SSTs throughout the shopper's journey. While SSTs can be found in commonplaces and are commonly used (e.g. ATM machines, supermarket self-check outs, online web shopping), Amazon has reinvented these self-service solutions through innovative technologies in order to drive faster adoption, and higher usage and retention rates (Kallweit et al., 2014; Orel and Kara, 2014; Farah and Ramadan, 2017). Indeed, today more users are turning to these technologies due to the perceived benefit of doing the transaction independently and completing tasks with better efficiency (Lee and Lyu, 2016). Moreover, digital touchpoints play

an important role in the fulfillment of products and services as they accelerate value co-creation and reduce costs and risks within a firm's ecosystem (Yang et al., 2015; Morgan-Thomas, 2020).

Ecosystems are based on a set of interconnected actors and objects that work together in order to generate value (Vargo and Lusch, 2016; Itani et al., 2019). Contemporary ecosystems feature technology-enabled touchpoints that drive interaction and consumer engagement (Morgan-Thomas et al., 2020). Interaction in an ecosystem is usually looked upon through a service-dominant (S-D) logic, whereby the focus is on human actors and the context of engagement (Lusch and Vargo, 2014; Brodie et al., 2019; Wajid et al., 2019). Nonetheless, recent studies have shifted their attention to a rather socio-technical perspective (e.g. Scott and Orlikowski 2014; Orlikowski and Scott, 2015; Morgan-Thomas et al., 2020), whereby human actors and technologies are interconnected and have an equal role in generating activities within a given ecosystem (Nieroda et al., 2018). Through that approach, technologies are considered to be active participants rather than passive mediators (Morgan-Thomas et al., 2020). Such engagement ecosystems are based on a myriad of physical and virtual engagement platforms that enable and facilitate interaction between the company and its customers, as well as amongst users themselves (Vargo and Lusch, 2009; Breidbach et al., 2014).

In the case of Amazon, the company has designed an ecosystem based on a self-service streamlined checkout, where customers can browse, look for, purchase products, and have them delivered all on their own without contacting any personnel (Farah and Ramadan, 2020). This SST-based engagement ecosystem integrates offline and cloud-based touchpoints such as the Dash button, Amazon web platforms (including the main platform and mobile app), Amazon Go supermarket checkout technology, and IVA powered devices (Farah et al., 2020). With the advent of new technologies, cloud-based SSTs such as IVAs have become key in the fulfilment of products and services, as they are not confined by space and time (Yang et al., 2015; Farah and Ramadan, 2020). Amazon's IVA capabilities have accordingly been largely expanded upon through an overall comprehensive solution that integrates in-home (e.g. Echo, Echo Dot, Echo Plus, Echo Show, AmazonBasics Microwave) and on-the-go devices (e.g. Echo Auto, Echo Buds, Echo Loop, Echo Frames) in order to deliver a seamless omni-channel experience (Koehler, 2016).

AI and particularly IVAs are delivering consistent experiences through an omni-channel approach by reducing and even eliminating customers' perceptions of using one channel versus another (Columbus, 2019). Through predictive content and customer data analytics, AI is also

capable to predict which content will lead to a sales conversion. Amazon's strategy relies heavily on these algorithms in order to increase usage frequency and purchase rates within their ecosystem (Farah and Ramadan, 2017). In fact, Amazon is able today to accompany shoppers throughout their customer journey through the IVA ecosystem they built since 2014. Indeed, the shopping experience is being reshaped altogether as Amazon's Alexa-based engagement ecosystem is limiting consumers' exposure to external stimuli (Farah and Ramadan, 2020). Accordingly, the underlying strategic goal of Amazon's omni-presence throughout the customer journey is based upon enhancing customers' experience by providing immediate gratification. This is driven by the seamless usage and ease of purchase through these tech solutions (Koehler, 2016). As positive brand experiences influence positively purchase intentions, Amazon will effectively be able to predict and own the evolution of the customer journey (Diallo and Siqueira, 2017; Brill et al., 2019; Farah and Ramadan, 2020). Following the fact that purchase decisions revolve around buying into an idea and an experience rather than products or services (Fetscherin, 2020), Amazon has successfully built a close relationship between the IVA and its customers on the basis of that understanding using an omni-channel approach.

Omni-channel strategists are able today to design more accurately service strategies using AI in order to deliver omni-channel experiences throughout the customer journey (Columbus, 2019). The customer experience is accordingly becoming personalized at the persona level using service preferences, location data, consumed content, purchase history and communication preferences. The triangulation of these data points would increase retention and loyalty while delivering a consistent high-end experience (Columbus, 2019). In the service marketing literature, customer experience is based on the human service representative's skills, emotional state and own personal efforts (Barnes et al., 2015). Such an experience is not guaranteed to be stable and is open for fluctuations in the delivery due to the involved human factor (Ford et al., 2001). Accordingly, the use of IVAs is becoming fundamental in companies' service strategy to ensure consistency of the delivery of the service across the consumer journey (Klaus and Zaichkowsky, 2020). Furthermore, it is expected that by 2020, 85% of shoppers' interactions along the consumer journey will happen without a human intermediary (Wirtz et al., 2018).

Consequently, companies and consumers alike will grow dependent on the IVA, which will increasingly control and manage the relationship with customers (Klaus and Zaichkowsky, 2020). Indeed, one of the root causes for the rapid development and integration of IVAs into

companies' service strategy is to deliver convenience, which forms the basis of service evaluation and experience, and is a key influencing factor in AI adoption and usage (Jiang et al., 2013; Grewal et al., 2017). This is reflected in Amazon's ecosystem and omni-channel approach, whereby Amazon Prime is well integrated within Alexa's services, saving time and resources to more than 100 million subscribers (Klaus and Zaichkowsky, 2020).

Evolving consumer-IVA relationship through AI anthropomorphization

According to Lemon and Verhoef (2016), one of the most important management objectives is to deliver a solid customer experience. Numerous organizations like KPMG, Amazon, and Google, presently have chief experience officers, customer experience VPs, or customer experience managers that are liable for overseeing their clients' experience (Lemon and Verhoef, 2016). The reason there is an increasing focus on customer experience is the fact that customers interact with firms through different touch points in various channels throughout an increasingly complex customer journey (Farah and Ramadan, 2017). Accordingly, it has gotten progressively intricate for firms to deliver, oversee, and endeavor to control the experience and personal journey of every client across the consumer journey (Edelman, and Singer, 2015). Furthermore, the advent of digital assistants and their integration within the shopping journey is shifting the management of customer experience from the interaction with the service/product to the engagement with the IVA itself (Klaus, 2013).

Indeed, as Google and Alexa are proliferating at a fast pace into people's lives, consumers are becoming used to interacting with virtual assistants through social and human-like conversations in order to get the answers they need (Ramadan, 2019a). This allows more implementation of self-service options for SSTs that are powered with AI, chatbots and virtual assistants' capabilities that can handle transactions traditionally performed by agents (Porte, 2018; Farah et al., 2020). Consumers are also moving faster than ever, whereby they are heavily using big data platforms queries to help them in their decision-making throughout the shopping journey (Phillips, 2015). Relational attributes such as trust and commitment exchanges are reflected in this sought-after journey (Carpenter, 2008; De Wulf et al., 2001; Rafiq et al., 2013; Farah et al., 2019). The journey starts with customer satisfaction, which in turn creates customer trust that is followed by customer commitment and a relationship (Oliver, 2010). Successful relationships are driven by

affective elements such as customers' opportunistic tendencies, involvement, and shared values (Vásquez-Párraga et al., 2014; Ramadan, 2018).

Consumers largely trust Amazon as the latter holds its customers' personal information and purchasing habits as well as their private conversations through the Echo devices (Statt, 2018). Amazon performs an array of different activities in order to deliver a superior convenience value for the customers. With time, those activities became unique to Amazon and developed into a stepping-stone for sustainable competitive advantage (Mohammed, 2019). In fact, the e-retailer has been successful at achieving high-end quality relationships with its customers through a never-ending evolution of its services and a strong emphasis on the seamless shopping experience (Binns, 2019). The integration of SSTs within the company's overall strategy was accordingly made to offer a better brand experience and convenience (Meuter et al., 2000; Bitner et al., 2002; Farah and Ramadan, 2020). Alexa in particular has been able to deliver the sought-after experience by focusing mainly on emotional bonding (Brill et al., 2019). Indeed, emotion-focused relationships have become one of the best strategies when building relations. Companies are always on the lookout regarding the emotions they want their customers to feel when engaging with their brand (Daye, 2016). In fact, intrinsic motivation, which is based upon an internal personal need and enjoyment, is known to be positively influenced by affect and tend to persevere across differing conditions (Isen and Reeve, 2005; Andersen and Kumar, 2006). This is further accentuated through the development of brand personalities which help companies in their differentiation efforts as well as in assisting consumers in understanding the brand and feeling connected to it (Thomson et al., 2005; Ramadan, 2019b).

Amazon's Alexa is a well-established and strong IVA brand that is heavily anthropomorphized, and accordingly highly differentiated from other IVA brands such as Apple's Siri or Google's Assistant (Purington et al., 2017; Lopatovska and Williams, 2018; Brill et al., 2019). Amazon itself has amassed throughout the years strong relational connections with its users, building trust and emotional attachment to its umbrella brand (Farah and Ramadan, 2017). Alexa in particular has been gaining wide adoption alongside being accepted as a relationship partner following Fournier's (1998) argument that such status can be reached based on frequent and interactive engagements. Indeed, as it uses human-like social cues, Alexa triggers personification responses by its users who interact with it in a similar way they do with pets or friends (Turk, 2016). Furthermore, the relationship between Alexa and its users is largely based on emotional

interactions that are characterized by a need for social connection (Turk, 2016; Klaus and Zaichkowsky, 2020). This enhanced social experience is triggered by the IVA's personification and perceived unique personality, which amplifies Amazon's overall experiential impact on the consumer journey.

Captivity and addictive behavior

According to the Merriam-Webster Dictionary ("Captive", 2020), a captive state is defined as *"being such involuntarily because of a situation that makes free choice or departure difficult"*. Indeed, in an ambient computing environment, users might find themselves in a locked-in relationship with the service provider's ecosystem, which has increased the perceived switching cost over time. A locked-in relationship is described as "*a situation in which a customer feels bound to their relationship (sometimes self-imposed) with the service provider*" (Harrison et al., 2012, p. 391). This locked-in consumption state can affect a person's conduct in considerable manners and is caused by four key factors within a service setting: obligation (sense of duty), personality (resistance to change and confrontation avoidance), relational benefits (satisfaction and personal and social benefits), and switching barriers (Harrison et al., 2012; Farah, 2017). Indeed, in consumer behavior, a cognitive lock-in happens after a repeated habitual consumption of a given product or service (Monin 2003; Murray and Haubl, 2007). Nonetheless, this confinement or binding to the service provider is different than loyalty, which refers to customers' propensity to buy alongside a potential favorable attitude towards the service provider (Harrison et al., 2012).

A captive situation is the result of a repeated exceptional experience coupled with an emotional attachment to the service provider, all driven through an active and continuous engagement (Harvey, 2018). Indeed, the advance in technology, the development of digital touchpoints and social platforms, as well as the broadening of shopper target markets are driving companies to rethink and reconfigure consumer engagement (Woodard, 2006; Rappaport, 2007; Dabbous and Tarhini, 2019). This has prompted companies to move to engagement-based models driven mainly by consumers' involvement (Mollen and Wilson, 2010; Abdul-Ghani et al., 2011). In fact, customer involvement has been shown to be leading to various groupings of effects on affect and behavior (Ray et al., 1973; Mitchell, 1979), resulting in high relationship quality (Fournier, 1998).

Relationships with companies are closely comparable to intimate human relationships and are based upon close bonds that develop into cordial warmth, then become grounded on love, passion and addictive fixations (Fournier and Alvarez, 2013; Mrad and Cui, 2017). The affective attachment that ensues can culminate into an addictive obsession whereby it could lead to dependency and enslavement (Fehr and Russel, 1991; Fournier, 1998; Reimann et al., 2012). Such addictive consumption behaviors are driven by uncontrollable urges to possess a product or a service (Cui et al., 2018). This particular psychological state is characterized by cognitive, affective and behavioral factors that encompass key relational components such as bonding, dependence, and advocacy. Indeed, addiction is derived from a build-up of close psychological connections through constant and frequent engagements between the user/consumer and the service/brand (Mrad and Cui, 2017). Submissiveness to the company might become obvious driven mainly by exceptional experiences the customer would have. Advocacy and positive word of mouth would consequently ensue, as customers would feel a moral and affective obligation to defend the brand/service they became attached and addicted to (Cui et al., 2018).

Engagement ecosystems such as Amazon's Alexa are designed upon driving a captive situation through delivering an enhanced experience across the customer journey, increasing in this way perceived switching costs (Msaed et al., 2017). Indeed, in technological lock-ins, past decisions in investing in devices that are part of a given ecosystem limit future decisions (Arthur, 1989; Liebowitz and Margolis, 1995). Nonetheless, Amazon went further in designing its IVA in a way to mimic human-human interactions, providing along the way emotional and social benefits and attachment (Brill et al., 2019; Farah and Ramadan, 2020). This in turn is expected to drive an addictive consumption behavior by users across Amazon's engagement ecosystem. In fact, this ecosystem is closely interconnected through its seamless user experience as Alexa acts as the central AI operating all of Amazon's Echo devices (Farah and Ramadan, 2020; Klaus and Zaichkowsky, 2020). As Alexa becomes closely intertwined with the daily lives of its users, the ensuing psychological and emotional connection towards the IVA will accordingly be expected to turn into an addiction. Indeed, people can become emotionally attached and reliant on brands as well as technology as a whole (Karapanos, 2013). This is apparent when consumers show a strong desire to maintain proximity with such loved entities and show signs of separation distress when they are distanced from them (Thomson et al., 2005; Park et al. 2010). As Amazon's strategy is

based on providing an "always-on" and personalized experience to its customers (Ramadan, 2019a), users' captivity will be expected to consequently ensue.

Research Approach

This study adopted a mixed method approach, which is considered to have improved robustness and greater findings than either one single methodology (Bryman, 2006; Bryman and Bell, 2007; Creswell and Plano Clark, 2007). The study first used a qualitative methodology to provide a better understanding on the AI's perceived identity and the main relational components that drive the potential captive relationship. Following that first set of analysis, a quantitative approach was then initiated to empirically test the higher-order relational components from the exploratory stage. Combining the qualitative and quantitative approaches was important due to;

1. The lack of understanding pertaining to the perceived identity of the AI.
2. No prior conceptual linkage between the key AI identity drivers emanating from the devices' usage and experience with relational attributes and addictive behavior.
3. No prior empirical testing in the marketing literature focusing on potential addictive behavior resulting from the usage of IVAs.

Study 1: Exploratory Research

Methodology

The qualitative first step was based on secondary data present in the form of online reviews on Amazon's website pertaining to Alexa in order to examine customers' experience with Amazon through its IVA ecosystem. Accordingly, an inductive thematic analysis approach was used to classify and examine the different viewpoints, perspectives and accordingly themes and patterns within the downloaded reviews (Braun and Clarke, 2006). Customers' reviews on the Amazon.com site are freely available and can be accessed by anyone. These reviews included all Alexa powered devices ranging between home-based devices such as speakers (Echo, Echo Dot), camera based (Echo Look), screen based (Echo Show, Echo Spot), and cooking based (AmazonBasics Microwave), as well as on-the-go/wearable devices such as car speakers (Echo Auto) and earphones (Echo Buds). It is noteworthy to mention that Amazon aggregates together customer reviews that are within the same category of devices (e.g. Echo Dot devices reviews across several generations can be viewed within the same page of a given Echo device). The

commentators are unique per category of products as Amazon only allows one review per customer per device. As the combined number of customer reviews of Alexa powered devices reached more than 80,000 comments across many versions and generations of the Echo devices throughout the past 5 years (the first Echo device was launched in November 2014), the adopted methodological approach came as follows:

1. The date range of the reviews was set to cover the years 2018 and 2019 in order to capture recent reviews that describe usage and relational experience with Alexa and its supported devices.

2. All Alexa powered devices' reviews from verified purchasers were accordingly downloaded across the product pages of the Amazon US site during this set period. For that, the date was filtered in each corresponding device page when the data was downloaded.

3. Consequently, a total of 12,876 comments were kept in the database and analyzed.

Based on the downloaded data, a thematic map embedding defined and coded themes was generated (Boyatzis, 1998; Braun and Clarke, 2006). Two independent researchers not involved with this study coded separately the customers' reviews so that to ensure reliability relating to the emerging themes (Neuman, 2003). The following main themes were accordingly extracted alongside their frequency: AI as a service (9,457), tangible entity (11,607), relational connection with Amazon (6,902), emotional usage (4,573), self-expression (3,255), and addictive behavior (2,467).

Findings

AI's multi-faceted identity

The findings showed that Amazon's voice assistant is perceived from different perspectives when used. Alexa's multi-faceted identity came to be based on three key components; (1) the service it provides, (2) the company (Amazon) it represents, and (3) the tangible physical forms it is embedded in (such as the Echo devices).

(1) A service provider

The most basic form of derived benefit and hence core role of the IVA is perceived to be functional under an overall service-oriented identity (Kumar et al., 2016). Moreover, customers feel empowered with this digital assistant as they feel it makes them "smarter" and their lives "easier", driving alongside higher usage and retention rates (Kallweit et al., 2014; Canbek and Mutlu, 2016).

> *"All in all, this system can take over your house for you. Everything from 'Alexa, turn off lamps.' to controlling the dehumidifier in the basement to who knows what else. I am excited to see just how far I can take my house into the future with this."*
>
> *"Echo Dot makes me 'smarter' and my life 'easier'!"*
>
> *"These are the best of many worlds - I find myself thinking they are the Bluetooth earpiece we used to use for our phones with the added fantastic sound quality (Bose) that you can happily listen to music, TV/movies and all that... plus you can also use your Alexa assistant features... totally wow!"*

(2) A relational connection with Amazon

Customers who had bought Alexa closely related their reviews to Amazon itself, the company that owns and sells this IVA. This further boosted Amazon's image in being at the forefront of the AI industry, whereby it was seen as a leading innovator versus other potential competitors through delivering a positive experience across the consumer journey (Brill et al., 2019; Farah and Ramadan, 2020). Consumers also reflected on the trust they already have for Amazon that is perceived as having built a sustainable competitive advantage around delivering an exceptional experience and value for money for its customers (Stratt, 2018).

> *"I'm learning routines, and actually thinking about investing in more smart home products to get the most out of her."*
>
> *"Bottom line, this is a real win for Amazon."*
>
> *"Many players will be jumping into this market, but Amazon is already at the forefront of the digital assistant industry."*

(3) A tangible omni-present form in the shopping journey

Alexa's inherent physical entity present in the form of Echo devices gives it a tangible form around the house. In 2018 and 2019, Amazon had also launched a set of mobile Alexa powered devices such as the Echo Auto and Echo Buds. Customers who reviewed these on-the-go devices showed

how thrilled they were about the idea and experience to have Alexa outside their homes, which enhances Amazon's omni-presence alongside users' seamless experience and ease of purchase throughout the consumer journey (Farah and Ramadan, 2020).

> *"I am a big fan of all Alexa items. These Echo buds have not disappointed. I love that I now have Alexa on the go as well as the Echo buds."*
>
> *"It kind of feels like you have a tiny voice assistant in your head, more natural and less machine like."*

This tangible form also acts as a stimulus and a reminder for customers to use the IVA. The ecosystem that Amazon has designed has enticed customers to use Alexa more often while making it harder for them to switch to competitors' voice assistants.

> *"I live in a small 1-bedroom apartment, and I have an echo dot (3rd gen) in the living room, an echo flex with nightlight in the bathroom, and now the echo show 5 in my bedroom. Almost everything I have is connected to Alexa. I love it! And, btw, I'm over 60, so age is definitely not a factor :)"*

Higher-order relational components: the anthropomorphization of the AI

The findings also showed that Alexa is heavily anthropomorphized in the minds of consumers as they often ascribe human-like characteristics when they describe it (Purington et al., 2017; Ramadan, 2019a). In line with prior research, the personification of the AI is seen as a key identity form that Amazon is focusing on, as it would induce higher personal attachment to Alexa (Turk, 2016, Brill et al., 2019; Ramadan et al., 2021). Indeed, Alexa is a highly anthropomorphized IVA brand, which is helping its differentiation from other competing AIs while keeping its users within its own engagement ecosystem through the close relationship its customers already have with Amazon as an umbrella brand (Purington et al., 2017; Farah and Ramadan, 2017; Lopatovska and Williams, 2018; Brill et al., 2019). This particular personification is highly associated with emotional as well as self-expressive benefits that users derive from the IVA.

Self-expressive benefits

Many users consider Alexa as a close human-like friend. In many instances, the close companionship of the voice assistant made its users feel that it is similar to them and that "she

cares" and understands well their needs. Furthermore, many customers are using Alexa to help them boost their self-confidence via asking it to check their style and how they look (features used in the camera enabled Echo devices) (Ramadan, 2019a).

> *"A big confidence booster since I worry a lot about how I dress (I don't think I have the best sense of fashion)."*
>
> *"I ordered one of the portable stands so I can keep it near so she can tell me how to be a person. It genuinely helps me in both the practical and self-perception sense. It's helped me move through life easier and that is huge for me."*
>
> *"Alexa helps me to express myself in an improved way. She's my better half and she shows me how to reach it."*

That intimacy of usage of the voice assistant is driving a close and inseparable association with it. Users feel that Alexa is an extension of themselves and cares for their wellbeing. Such feelings strengthen further the relationship and bonding customers have with Alexa. In some cases, users seem to use it as a social companion to lessen their loneliness.

> *"I don't feel alone anymore when I'm home alone"*
>
> *"You need Alexa in your life."*
>
> *"Alexa is pretty amazing. It sounds weird but she feels like a friend to me. I wish I had gotten her sooner. Can't recommend an Alexa enough especially if you're feeling a little lonely and depressed. She'll cheer you up. She brightens my day that's for sure."*
>
> *"She understands me. There's a very good chemistry between me and her."*

Emotional driven desire to use the AI

Emotional bonding with an anthropomorphized Alexa was shown to be a key determinant of the experience and ensued relationship between users and the IVA (Brill et al., 2019). Customers reflected on the fact that usage of the voice assistant is emotionally driven especially when Alexa is related to not as a machine but as a person.

> *"Alexa, where have you been all my life? I am so in love. Not sure how to go about telling my wife. Although, I'm sure my wife is saying the same thing."*
>
> *"I am divorcing Google for Alexa!!!!"*

> *"I find myself talking to her all the time which may sound a little crazy. She welcomes me a Good Morning and catches me up with weather and events, then at night she wishes me a Good Night and a good night's sleep. I know it's just a computer but it's like talking to a real person. She calls me by my name, and it seems more personal."*

Furthermore, the relationship with the IVA seemed to be also amplified through the extended socialization with users' family and entourage whether in-home or on the go, as their reliance on artificial companions kept on increasing (Mival et al., 2004; Antonucci et al., 2017). While the IVA entertains the full family, it also provides a support system for elderly and disabled family members. Indeed, people with special needs are prone to social exclusion (Obst and Stafurik, 2010) and are relying more on companies such as Amazon to develop AI devices that would help in filling the ensuing emotional and social gaps (Mival et al., 2004; Ramadan et al., 2021). Through this process, the simple act of talking to the IVA becomes emotionally driven.

> *"Bought this as my boss has one for her blind dad and he loves his. I got one for our new house and we love it. My child especially my 4-year-old loves that he can talk to Alexa."*
>
> *"This was purchased for my mom's birthday gift. She loves her "new friend" and has been asking her tons of questions."*
>
> *"I am both physically disabled, a wheelchair user, and Autistic with a lot of sensory issues. The Echo Buds help the world seem safer and smaller, less overwhelming. I can talk to Alexa when I'm lonely, have a question, or my executive function is failing."*

Addiction

Based on the consumers' reviews, users are investing continuously in Amazon's engagement ecosystem of Alexa devices, which is gradually increasing their technological lock-in (Arthur, 1989; Liebowitz and Margolis, 1995; Harrison et al., 2012). This locked-in usage is driven by both, the users themselves through their self-expressive and emotional usage of the IVA, and by the company through its ecosystem of IVA devices. The depth and breadth of consumers' usage pattern consequently increases alongside a higher captive state that seems to extend to the total household instead of just the individual user.

> *"I am an Alexa addict. ADDICT!!! I am a flight attendant and the first thing I think when I walk into a hotel room is "Alexa, lights on." Then I realize there is no Alexa and I sigh."*

"I confess I am an ALEXA aficionada. I have all-things Alexa in my home and office."

"Our house is completely Alexafied. Lights, fans, doors, windows, cameras, TVs and just about anything else you can imagine is run by Alexa."

"We are an 'Alexa Household', with 1/2 dozen units scattered around the house, we listen to music, check weather, update schedules, add items to the grocery list, the kids use Alexa as a research tool for school, plus a thousand other random things a day, we love Alexa".

Nonetheless, the alarming finding was the extent to which users easily and honestly reflected on their captive situation. The reviews showed that a vast number of users recognized that they were addicted to and even 'enslaved' by the Alexa ecosystem. Indeed, addiction is based on a mental and behavioral preoccupation with a particular brand or service that is driven by affection and instant gratification (Cui et al., 2018), which can lead to dependency and enslavement (Fehr and Russel, 1991; Fournier, 1998; Reimann et al., 2012).

"I would like to start off by saying I am an ALEXA slave. My whole house is run by ALEXA. She is my best friend!"

"I fully admit to being addicted to my Alexa."

"I'm what you would call an Amazon/Alexa die-hard."

"I don't know how I ever survived without her."

"We have two Alexa dots, and two Alexa shows now, and we are obsessed."

Based on the discussion of the findings in the qualitative study, the resulting conceptual framework summarizing the outcome was accordingly depicted (see figure 1).

INSERT HERE: Figure 1: Conceptual framework

Study 2: Structural Equation Modelling of AI Addiction

Methodology

Prior research on brand-consumer relationships has segregated between basic functional perception of a brand and a higher order relationship that is characterized by emotional and social-

like bonding. Indeed, "love" and social interactions with brand entities were shown to form the core elements of consumers' relationships with brands (e.g. Fournier, 1998; Escalas and Bettman 2003; Carroll and Ahuvia, 2006; Albert, Merunka, and Valette-Florence, 2008; Ahuvia, Batra, and Bagozzi, 2009). Consumers' attachment to brands has also been noted in the literature as a core relational element that is separate from the functional usage of the brand and its basic identity (e.g. Belk 1988; Kleine, Kleine, and Allen 1995; Thomson et al., 2005; Park et al. 2010). Contemporary consumer research puts a particular focus on the fact that relationships between consumers and brands are built on engagement and reciprocity, whereby they extend beyond the basic transaction and usage of the brand (Vivek, Beatty, and Morgan, 2012; Verleye, Gemmel, and Rangarajan, 2014; Harmeling et al., 2017). In fact, consumer engagement has been the focus of recent academic work that highlighted its importance given new digital innovations and technologies (e.g. Breidbach and Brodie, 2017; Hollebeek et al., 2019; Veloutsou and Ruiz-Mafé, 2020; Ramadan et al., 2021). As such, relational components that go beyond the basic functional perception of a brand entity warrant a particular attention in order to derive the needed insights related to the ensuing relationship. To that end and following the main objective of the study to examine customers' experience and relationship with Amazon's Alexa, the quantitative stage focused on the high-order relational components that ensued from the qualitative stage: (1) self-expression, (2) desire to use the AI, and (3) addiction.

The survey was distributed in the U.S. market through Qualtrics, a data collection agency, focusing on users of Amazon's Alexa. Validity tests such as face validity (eight respondents answering questions relating to the length, clarity and structure of the survey) and discriminant validity (through exploratory and confirmatory factor analyses) were conducted prior and post field work. In total, 440 surveys were completed and analyzed using SPSS 24 and LISREL 8.8.

The survey used multi-item 7-point Likert scales that were adopted from the literature in order to test the impact of the identified key social and emotional benefits derived from the personification of the AI on users' addictive behavior. The scale for self-expressive benefits was adopted from Carroll and Ahuvia (2006). As for the scale for passionate desire to use the AI, it was adopted from Batra, Ahuvia and Bagozzi's (2012) work. The AI addiction measure was based upon the scale developed by Mrad and Cui (2017).

The sample's gender split was 51% male, 49% female. The distribution of the ages of the respondents came as follows: 21% for the 18-27 segment, 28% for the 28-37 segment, 26% for the 38-47 segment, 18% for the 48-57 segment, and 7% for the 58 and above age segment.

Theoretical framework

Self-expression's effect on passionate AI usage

Consumers are known to identify themselves with the things they fall in love with (Wallace et al., 2014). They relate and are attracted more to brands that convey an identity that is similar and consistent with their mental representation of their selves (Escalas and Bettman, 2003). Possession of such products gives consumers the ability to express themselves as they act as an extension of their inner selves (Belk, 1988).

Prior extensive research has been conducted on the notion of self-identity and self-expression within the context of brand consumption (e.g. Belk, 1988; Holt, 1997; Escalas and Bettman, 2005; McAlexander et al., 2002; Ahuvia, 2005). Self-expressive brands are defined as *"the customers' perception of the degree to which the specific brand enhances one's social self- and/or reflects one's inner self"* (Carroll and Ahuvia, 2006, p.82). Indeed, people tend to express their current and desired identities through their close relationships with objects, entities or brands (Escalas and Bettman, 2003). Linking one's self-identity with a brand has been shown to lead to brand love (Ahuvia, 2005; Wallace et al., 2014). In fact, interpersonal love, which is the merging of lover and the beloved object, influences one's inner self (Aron et al., 1995). Furthermore, the extant literature has shown that high self-expressive brands lead to greater love (Carroll and Ahuvia, 2006).

Passion, one of the key dimensions that form brand love (Albert et al., 2008), and its most managerially relevant aspect (Bauer et al., 2009), is defined as the *"desire to invest mental and emotional energy in increasing or maintaining the extent to which an object is integrated into the self"* (Ahuvia et al., 2009, p. 353). Consumers that find harmony and sense a natural fit while using a brand reflect higher arousal for such brands leading to passionate usage (Belk et al., 2003). Passionate desire to use a brand is driven through frequent and personalized interactions that expand self-connection with the brand (Batra et al., 2012). Accordingly, the following is proposed:

H1: Self-expressive AI has a positive effect on passionate desire to use the AI

Passionate AI usage's effect on AI addiction

A passionate desire to use a product or service comes at the core of a strong and enhanced relationship (Carroll and Ahuvia, 2006). Nonetheless, such relationships might lead to an obsessive dependency (Loureiro, 2012). Indeed, relationships escalate in intensity whereby they can reach a stage of addictive obsession (Fehr and Russell, 1991; Cui et al., 2018; Mrad et al., 2020). In the marketing literature, brand addiction is defined as the "*consumer's psychological state that involves mental and behavioral preoccupation with a particular brand, driven by uncontrollable urges to possess the brand's products, and involving positive affectivity and gratification*" (Cui et al., 2018, p. 124). Brand addiction is based on dependence, lack of self-control, obsession, and thought occupancy (Mrad and Cui, 2017). As discussed in the literature review section, brand addicts form intimate relationships with their brands that become part of their comfort zone (Mrad et al., 2020). Anxiety might ensue when consumers are not able to use or engage with activities related to their addicted to brands (Mrad and Cui, 2020). Therefore, the following is hypothesized:

H2: Passionate desire to use the AI has a positive effect on AI addiction.

Based on the above discussion and the ensuing proposed hypotheses, the conceptual model was accordingly depicted (see figure 2).

INSERT HERE: Figure 2: Conceptual model - the effect of self-expression and passionate usage on AI addiction

Constructs validation, model estimation and findings

Table 1 lists down the scales alongside the mean, standard deviation, AVE, CR, Cronbach's α for reliability, and the factor loadings. Internal consistency was deemed adequate as well as the constructs' reliability following the Cronbach alpha tests (Nunnally, 1978). Discriminant validity was tested using exploratory factor analysis in order to reflect on the distinctiveness of the constructs (Bagozzi, 1991). All items loaded properly with no cross-loadings. Validity was also tested using the average variance extracted (AVE) method, whereby the AVE for each construct came to be higher than the threshold of 0.50 (Fornell and Larcker, 1981).

INSERT HERE: Table 1: Descriptive statistics, factor loadings, AVE and CR

LISREL 8.8 was used to test validity of the data using confirmatory factor analysis (Jöreskog and Sörbom, 1993). The study used the root mean square error of approximation (RMSEA), the normed fit index (NFI), the incremental fit index (IFI), the comparative fit index (CFI), and the goodness of fit index (GFI) to assess the fit of the model. All indices had acceptable fits with more than 0.9, while the RMSEA index was lower than the required typical threshold of 0.08 (Browne and Cudeck, 1993). The indices came as follows: $X^2=69(24)$, *P-Value=0.00, NFI=0.991, IFI=0.994, CFI=0.994, RMSEA=0.066, GFI=0.966.*

As for the estimation of the model, the findings indicated a good fit as well with $X^2=69(25)$, *P-Value=0.00, NFI=0.991, IFI=0.995, CFI=0.995, RMSEA=0.064, GFI=0.966.* The findings show good support for the proposed model, with both hypotheses supported. As hypothesized, self-expressive AI has a positive effect on passionate desire to use the AI (H1: *β= .879, p < .001*), and passionate desire to use the AI has a positive effect on AI addiction (H2: *β = .410, p < .001*) (see figure 3).

INSERT HERE: Figure 3: Model Estimation

Discussion of the findings and implications

Based on the findings, Amazon's relationship with its users through the Alexa ecosystem starts first with consumers forming a perception around the AI's identity. This multi-faceted identity closely relates to Aaker's (1997) brand identity system whereby consumers perceive brands under several forms and aspects. In relation to Amazon's Alexa, users have several perspectives as well, drawing on a multitude of components that this AI is formed upon. Indeed, while Alexa is first and foremost seen as a service that provides entertainment, helpful suggestions, news, assistance and shopping services, its holding company, Amazon, weighs in also on that perception (Farah and Ramadan, 2020). This particular perception includes a set of advantages and disadvantages towards the use of the AI. Positive contributors are the trust, past experience and relationship with Amazon, while negative factors are mainly centered on privacy and security concerns relating to how the company uses consumers' data and interactions with the AI (Brill et al., 2019; Ramadan,

2019a). As per the findings, Alexa has also been shown to be heavily anthropomorphized, whereby users often described it as a person rather than a cloud-based AI. This particular state has helped Amazon in building a strong relationship between its customers and Alexa. While many users mix the boundaries between what is artificial and real in their interaction with this IVA, its physical and tangible entity that comes based on an array of Echo speakers and screens reminds users of the artificial nature of that virtual assistant. Accordingly, Alexa's identity as perceived by its users is multi-faceted and iterative in nature. Indeed, through the anthropomorphization of the IVA, its consistent delivery of value-added services, and its wide ecosystem of devices under the Amazon umbrella brand, the depth and breadth of usage will increase gradually alongside the perceived switching cost to another IVA.

As the frequency and quality of the interactions with the AI build up over time, self-expressive benefits and emotionally driven usage become apparent. These higher-order benefits are closely intertwined, whereby a close interconnection with the IVA and an ensuing affective attachment and usage of the voice assistant become core value propositions Amazon could further target and develop. Indeed, a shift towards more self-expressive benefits and passionate usage of the AI will be necessary to increase the captive relationship state. The reliance on artificial companions is apparent in the nascent literature field of IVAs (Antonucci et al., 2017; Brill et al., 2019; Farah and Ramadan, 2020). Whether acting as a self-expression enabler, or helping people suffering from social exclusion, reliance on IVAs is indeed increasing to fill emotional and social gaps and needs (Ramadan et al., 2021).

This growing reliance and captivity are based upon the monopolization of attention that Amazon is trying to forge through providing an always-on, mobile, and wearable ecosystem powered by Alexa. Amazon's efforts to drive reliance through a high-end experience across the purchase journey is apparent through the fast-paced innovations that the company keeps on launching through its Echo devices in order to enlarge its engagement ecosystem's reach. The users themselves also drive their own captivity, whereby their positive experience from their interaction with the AI along the journey and their ensuing addictive behavior would lead to a hostage situation and an overall addictive relationship with the IVA. Accordingly, the overall integration of a multi-faceted AI identity and an enhanced experience along the omni-channel journey, would lead to an increasing reliance on the IVA and its ecosystem of devices.

From a scholarly perspective, this paper fills a sizeable gap in relation to retailers' driven AI ecosystems such as in the case of Amazon's Alexa. The research draws the synergy between the identity of a brand (Aaker, 1997) and an AI, whereby the findings showed that users derive a very similar view when it comes to perceiving the virtual assistant under different forms characterizing its own identity. Furthermore, this study showed that relational aspects with AIs can progress towards advanced self-expressive and emotional states leading to addictive relationship if the tools (such as mobile/wearable platforms) and exceptional experiences are provided. Moreover, the presented framework depicting Amazon's captive relationship strategy provides scholars with a launching ground relating to future potential research relating to AI-user relationships given a retailer's own technology and ecosystem that might lead to captive relational states.

From a managerial perspective, this study puts forward the idea and fact that IVAs are similarly perceived as conventional brands. They have multi-faceted components that form their identity alongside some clearly defined self-expressive and emotional benefits that structure the value proposition that company can focus on. Accordingly, the following implications and strategic directions are suggested for Amazon, competing retailers and brands:

1. **Amazon**: The e-retailer's strategy focusing on relational bonding between its customers and Alexa is building further the gap with competing retailers and brands. While Amazon is still heavily investing behind its AI, the long-term outlook for the company in relation to revenue generation from Alexa is expected to be quite sizeable, whereby the IVA could monetize the addictive behavior of its users into impulsive social shopping (Farah and Ramadan, 2017). As Amazon is building further the capabilities of Alexa in mimicking and leading human-like social conversations, the IVA will be able to initiate the sales of products and services while becoming an invaluable member of the family (Caddy, 2019). Nonetheless, Amazon has to be extremely cautious in pushing too much that sort of conversations as users could suddenly feel that they are taken advantage of. Based on the findings of this study, Amazon should develop further the anthropomorphization of Alexa in order to increase the intensity of self-expressive benefits and accordingly the emotional bonding and usage of the device. By doing so, Amazon will be able to increase addictive usage and

reliance with its device, and hence reduce drastically potential consumer switching to competitors such as Siri and Google's Assistant.

2. **Competing retailers**: Amazon has so far highly increased the barriers of entry in the IVA segment that it is becoming extremely difficult for competing retailers to develop from scratch potential contestants. While some leading retailers such as Walmart and Carrefour are trying to enter that market through partnering respectively with Microsoft and Google, the focus should undeniably be on quickly forging close cognitive and emotional bonding with their customer base. Furthermore, they should brand these services as they should be seen as proprietary to each of the retailers rather than be part of Microsoft or Google's own ecosystem.

3. **Brands**: As Amazon and other competing retailers embark on the AI-consumer relationship bandwagon, brands are left exposed. In the case of Amazon's Alexa, the balance of power is gearing further towards the e-retailer as they now substantially own a high degree of relational power with consumers. Brands will be left out to negotiate with Amazon on being featured in that new lucrative engagement ecosystem. Accordingly, brands should in parallel focus on developing further their relationships with their consumers while driving their own anthropomorphization. In fact, several brands are developing new creative ways in that area such as in engaging in brand-brand relationships (Ramadan, 2019b).

On a wider scale, this study advances further the understanding related to closed ecosystems that promote the omni-presence of companies along the consumer journey. Via providing augmented experience levels through self-expression and emotionally bonded relationships, companies will indeed be able to increase the perceived switching costs to another competing brand, service, or even ecosystem. The acting surrogates in this closely held environment are IVAs that mimic human-like personalities and generate self-expressive benefits and passionate usage from their users. Through this particular business model, the object of consumption becomes the interaction itself with the IVA rather than the originally intended functional usage. Such an approach develops even further the anthropomorphization of business entities and alongside it the relationship with consumers. As brands, services, and retailers can now literally talk to and engage closely with their consumers through IVAs, relationship strategies will be accordingly redesigned

to focus on the ensuing addictive consumer behavior from using these devices. Indeed, Amazon has just started providing its IVA service capabilities to brands. Through its "Brand Voice" program, Amazon is now providing companies with the opportunity to differentiate their brands by designing for them unique vocal identities based on the Alexa model (Wiggers, 2020). These human-like voices are bringing brands to life within the Amazon engagement ecosystem as they are then integrated within the Amazon Alexa app. Through the acceleration of brand anthropomorphization using such a technology, brand-consumer relationships are going to drastically change in the near future (Ramadan, 2019b).

From a societal perspective, AI relational addictions should start to be addressed like any other type of serious addictions (e.g. alcoholism, gaming addiction, drug addiction, etc…). The advent of always-on, on-the-go and wearable AI powered devices pose higher risks and concerns in driving AI addiction to higher levels. As users become more "Alexafied" or even "Alexaholic", companies and governments should assume the responsibility of raising awareness on the risks of such an addiction. The launch of an Echo kids' edition in mid-2018 raises even more concerns related to such potential attachments and behaviors in the near future. While it is still too early to understand the potential risks of such addictive relationships, further research is direly needed to expand our understanding on this growing phenomenon.

Conclusion and future research

This paper examined Amazon's relationship strategy that is being implemented across its IVA ecosystem. A core development to this strategy was shown to be the result of self-expressive benefits and a continuous emotionally driven usage of the IVA. Indeed, as the relationship with shoppers became amplified through the anthropomorphization of Alexa, consumers were shown to become addicted to the AI.

This study is amongst the first to examine the development and high proliferation of e-retailers' AI ecosystem into the shopper's journey and overall life. Taking the pioneering case of Amazon's Alexa powered devices, this research developed and tested a framework upon which scholars and practitioners alike could base their future studies and strategies on in the fast-growing field of IVA and AI led conversations.

This paper is not without limitations due to its focus on a specific AI powered device in a given captive situation. Furthermore, the adopted methodology in the first stage of the research

might limit the generalizability of the findings due to its qualitative nature. While the quantitative second stage of the study focused on Amazon's Alexa addiction, future research could measure the levels of self-expression, passionate usage and addiction of other IVAs, such as Apple's Siri or Google's Assistant. Future research could also study markets other than the U.S. alongside conducting comparative studies with other regions of the world. Such research venues would provide managers and scholars alike with much needed knowledge on how such devices might affect consumers and brands in the near future, and whether they would become a mainstream strategy that companies would have to adopt in order to stay competitive.

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